Ri Sightings and Explanations in PNG

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The Ethnozoology of the Ri

Mythological Constructs, Biological Realities, and the Intersection of Indigenous Taxonomy and Marine Mammalogy in Papua New Guinea

Introduction to the Phenomenon

The maritime and terrestrial environments of Papua New Guinea (PNG) represent some of the most ecologically diverse, biologically robust, and scientifically underexplored regions on Earth. Encompassing the eastern portion of the mega-diverse Coral Triangle, these waters support an intricate tapestry of ecosystems ranging from dense mangrove estuaries and shallow inshore seagrass beds to the deep-water habitats of the abyssal plain and adjacent oceanic trenches.[1] Alongside this rich biological landscape exists an equally complex landscape of indigenous cultural ontologies. Papua New Guinea is home to more than 820 distinct ethnolinguistic groups, each possessing its own

highly developed methods of interacting with, categorizing, and conceptualizing the local flora and fauna.[2] Within this profound intersection of undiscovered biodiversity and intricate indigenous folklore lies the phenomenon of the "Ri," a creature deeply embedded in the cultural consciousness and observational history of the indigenous populations of the Bismarck Sea, New Ireland, the Trobriand Islands, and the Sepik River regions.[3]

Referred to variously as the Ri, the Ilkai, or the Pishmary (a localized term translating roughly to "fish woman"), the creature is overwhelmingly described by local populations as an air-breathing marine mammal possessing a chimeric, semi-human physiology.[3] Eyewitness accounts spanning several decades consistently articulate a biological entity possessing the head, arms, and upper torso of a human being—occasionally featuring mammalian variations such as the head of a sea lion—terminating in the legless lower body and fluked tail of a large marine vertebrate.[4] For decades, these highly specific, persistent localized reports attracted the attention of anthropologists, cryptozoologists, and marine biologists, culminating in a series of targeted scientific expeditions in

the early to mid-1980s that sought to categorize the creature within Western Linnaean taxonomy.[6]

This comprehensive research report provides an exhaustive analysis of the Ri phenomenon. By synthesizing indigenous mythological frameworks, historical cryptozoological field data, and contemporary marine taphonomy and mammalogy, the analysis delineates the precise biological entities responsible for the sightings. Furthermore, it examines the epistemological processes through which known marine species are translated into anthropomorphic mythological figures within Melanesian cultures, exploring how Traditional Ecological Knowledge (TEK) and Western scientific paradigms both collide and collaborate in the categorization of the natural world.

The Ecological and Cultural Landscape of Papua New Guinea

To fundamentally understand the genesis and persistence of the Ri phenomenon, one must contextualize the environment in which it was born. Papua New Guinea is characterized by a geography that inherently isolates populations, allowing for

the independent evolution of both unique biological species and distinct cultural narratives. The topography consists of a mountainous, heavily forested interior running through the center of islands like New Ireland, flanked by coastal settlements entirely reliant on the sea for sustenance and cultural identity.[6]

The biodiversity of PNG is continuously yielding new discoveries, cementing its reputation among researchers as a frontier for unknown species. For example, terrestrial expeditions have uncovered giant, previously unclassified mammalian and reptilian species in the thick woodlands of the interior, such as a massive, loose-skinned omnivore adapted to humid forest conditions.[8] Historical cryptozoological literature even points to extreme anomalous sightings in the reedy swamps of Western New Guinea, such as the "Row," a forty-foot reptilian creature with a keratinous tail spike reported by early twentieth-century explorers interacting with the Kirrirri tribes.[9] While the biological veracity of such extreme reports remains highly contested, they underscore the broader reality that the Papuan landscape is vast, treacherous, and historically opaque to West-

ern scientific inventory. It is an environment where the discovery of a new, large-bodied animal is not viewed as an impossibility, but rather as an ongoing scientific expectation.[10]

In this environment, the indigenous populations have developed oral traditions that codify their relationship with the natural world. The written literary tradition of PNG is relatively young, having been stimulated primarily by the University of Papua New Guinea in the 1960s; prior to this, all ecological and historical knowledge was transmitted via oral traditions, myths, and legends.[2] These narratives encompass key aspects of cultural heritage, regional cosmologies, and social practices, such as the *kula ring* exchange practices and mortuary rituals documented extensively in the Trobriand Islands.[11] In these societies, myths are not merely fictional stories told for entertainment; they constitute an elaborate, practical, and heavily structured system of knowledge that explains the origins of man, the mechanics of the sea, and the rules of the afterlife.[2]

Animism, Imunu, and Transformative Mythologies

The Papuan cultural groups maintain animistic belief systems where the boundary between the material and the spiritual, and between humanity and the animal kingdom, is highly permeable. A central concept in Papuan culture is *imunu*, a pervasive spiritual power or life force that inhabits natural objects, animals, and the environment.[13] Ancestors, spirits, and localized deities are intimately tied to the landscape, and placating these spirits is a dominant theme in traditional beliefs, often personified in elaborate masked ceremonies.[13]

Throughout the Sepik River region and the coastal islands, indigenous origin myths frequently involve the fluid transformation of humans into animals, and vice versa. The creation myths of various groups reflect this fluidity. For instance, the Tangu people speak of a myth where salt water and fish miraculously emerged from the grave of a murdered daughter, while the Kiwaian peoples dictate that their earliest ancestors were crocodiles.[14] Similarly, the Keraki Papuans believe that sky beings known as Gainjin were the first inhabitants of the

earth, eventually returning to the sky with the exception of specific animals like snakes.[14]

This transformative ontology is perfectly exemplified by the legend of the *Pidu* among the Gope, Kerewo, and Urama tribes of the Kikori Delta in southern PNG. According to local legend, a group of village women and children, outraged by the greed of their husbands who secretly hoarded pork, declared they would leave the village. They leaped into the river and physically transformed into snubfin dolphins.[15] Consequently, these coastal tribes view the dolphins not merely as marine animals, but as their direct ancestors. They perceive the dolphins as sacred entities and maintain strict dietary taboos against consuming their meat.[15]

Other regional myths speak of humans transforming into marine life to escape peril or enacting vengeance. The *Pairío*, a massive, highly dangerous catfish said to inhabit the Kúbání-kikáva reef, is understood to be the transformed state of a malignant female spirit (a *dógai-órobo*) from Márukára Island. Attacked by a cloud of butterflies she could not disperse, she threw herself into the ocean and became a catfish, while the butterflies clinging to her hardened into brightly colored stonefish and

catfishes.[16] Similarly, the folklore of the Kiwai islanders features the *Origorúso*, a cavernous-mouthed man-beast or ogre with enormous ears that swallows prey whole.[16]

Within this deeply animistic cosmological framework, the observation of a creature that appears "half-human and half-fish" is not an impossibility, nor is it a biological anomaly requiring a novel scientific classification. Rather, it is a validated manifestation of the spiritual ecology. The environment is expected to produce entities that straddle the line between the human and the non-human. When a local fisherman observes a creature with human-like physical traits in the surf, their cognitive and cultural framework immediately places it within the realm of the transformative mythology inherent to the region.

The Ri within Indigenous Taxonomy: Barok and Susurunga Perspectives

The most compelling anthropological data regarding the Ri comes from the Barok and Susurunga peoples of New Ireland, extensively documented by anthropologist Roy Wagner of the

University of Virginia.[6] Wagner's extensive research into Barok social power, kinship, and ritual life—culminating in his seminal 1986 monograph *Asiwinarong: Ethos, Image, and Social Power among the Usen Barok of New Ireland*—emphasizes that Barok culture generates meaning through the creation of spatial and verbal images that elicit multiple, highly nuanced interpretations.[17]

Crucially, the Barok and Susurunga peoples maintain distinct, highly specific taxonomic classifications for the marine life in their local waters. The Susurunga utilize the term *Ilkai*, while the Barok use the term *Ri* to describe the humanoid marine creature.[6] When interviewed by Western researchers, these communities explicitly stated that the Ri or Ilkai was entirely distinct from other known marine mammals, including dolphins, porpoises, pilot whales, and dugongs.[6]

The indigenous linguistic treatment of the dugong is particularly revealing of their empirical observational skills. The Barok refer to the dugong as *bo narasi*, which translates to "pig of the ocean".[6] This nomenclature is highly descriptive and biologically astute, referencing the dugong's bulky, fat

body, rounded whiskery face, and strictly vegetarian, benthic grazing habits.[6] Because the local fishermen clearly recognize, actively categorize, and occasionally hunt the dugong (*bo narasi*), early Western researchers operating under Linnaean assumptions concluded that if the locals said the Ri was not a dugong, the Ri must therefore be a scientifically undiscovered species.[6]

However, a deeper ethnozoological insight suggests a far more complex dynamic regarding how indigenous taxonomies operate. Indigenous classifications often organize entities not solely by their genetic or phylogenetic relationships, but by their spiritual significance, behavioral anomalies, situational contexts, or ecological roles. For example, an emaciated dugong suffering from malnutrition, a dugong behaving erratically due to predator evasion, or a dugong viewed under the distorting effects of poor lighting and water refraction might not be categorized as a *bo narasi* (a standard, healthy "ocean pig"). Instead, it is classified as a *Ri*—a separate, anthropomorphic category reserved for marine phenomena that evoke the human form or display atypical, non-standard behaviors.[6] In Barok culture, the physical world

and the mythological world are heavily intertwined, and spells, rituals, and spirit animals (such as spirit pigs invoked in traditional spells) are part of the daily lexicon of environmental interaction.[18]

Indigenous Term	Ethnolinguistic Group	Tran Meanin
Ri	Barok (New Ireland)	Anth marine c
Ilkai	Susurunga (New Ireland)	Anth marine c
Pishmary	General PNG Pidgin	"Fish
Bo narasi	Barok (New Ireland)	"Pig
Pidu	Gope / Kerewo (Kikori Delta)	Snub Ancesto

Phenotypic and Behavioral Manifestations of the Ri

To understand the biological mechanisms underlying sightings of the Ri, it is first necessary to establish the exact morphological and behavioral paradigm reported by eyewitnesses. Unlike the highly stylized, fanciful mermaids popularized by Western media, literature, and Hollywood films—which often feature idealized human aesthetics, such as those seen in *Splash* or *The Little Mermaid*—the Ri is routinely described in far more grounded, pragmatic, and frequently "ugly" or feral terms.[4]

Anatomical Descriptions

The creature is universally identified by local informants as an air-breathing mammal rather than a fish or amphibian.[4] It possesses a distinct, rounded head that observers note appears "more human than anything else" when viewed breaking the surface of the water.[6] The upper torso is described as humanoid, featuring functional arms and distinct genitalia, leading to reports that explicitly categorize the creatures by sex (male, female, and juve-

nile).[6] The female Ri is specifically described as possessing a woman's breasts and hair.[19] The lower half of the creature lacks hind limbs entirely, tapering instead into a robust, elongated aquatic body terminating in a pair of lateral fins or a fluked tail.[4]

A highly detailed, independent observational account from 1973 by a biologist named Gary Opit, who was traveling on a vessel along the northern coast of PNG, corroborates the indigenous descriptions. Opit, who had spent time lecturing on ecology at a teachers' college in Lae and studying fauna at the Wau Ecology Centre, was traveling between Lae and Vanimo on the *Papuan Explorer*, a 340-ton cargo vessel.[6] During the voyage, around midday on October 3rd, Opit observed a round, brown head on the sea surface directly in front of the bow.[6]

Upon the vessel's approach, the creature executed a rapid, vertical dive, submerging straight down beneath the surface as if pulling itself under with its flippers and tail.[6] Opit noted that he obtained a clear view of the animal as it sank vertically through crystal-clear water two to three meters below the surface. He observed a round head and an elongated, human-sized body.[6] Crucially, Opit,

a trained observer, explicitly wondered if it might be a dugong but noted that the body was slim, directly contrasting with the naturally bulky, fusiform shape of a healthy dugong.[6] Furthermore, he noted that its method of diving—descending tail-first or vertically—was anomalous for known local marine mammals, which typically propel themselves forward and dive headfirst after raising their broad snouts to inhale.[6]

Behavioral Characteristics and Human Interaction

Behaviorally, the Ri is deeply integrated into the observable marine ecology of New Ireland and the surrounding islands. Local fishermen, magistrates, and villagers report the Ri not as an ephemeral, mystical spirit that vanishes without a trace, but as a tangible, co-existing biological entity that holds a special place in their cultural landscape.[6] Observations include:

- **Social Groupings:** Sightings frequently involve pods or family units. Indigenous informants reported to researchers that fami-

lies of Ri—consisting of a male, female, and child—were known to inhabit specific bays.[19] Another account detailed a line of male, female, and juvenile Ri swimming up into a freshwater stream by moonlight.[6]

- **Reproductive Behavior:** Informants have reported observing male and female Ri mating in the coastal surf, indicating an observable biological life cycle.[6]
- **Human Interaction:** The creatures are known to approach fishing vessels. A village magistrate in New Ireland reported that while fishing at sea, a Ri rose to the surface and stared at him from a distance of only about six meters.[6] The magistrate described the creature's face as somewhat monkey-like.[19] Furthermore, it was reportedly a common recreational sport for local schoolboys, during their December to January vacations, to free-dive offshore with glass face-masks specifically to catch glimpses of the Ri swimming in the shallows.[6]

The Cryptozoological Expeditions (1979–1985)

The integration of the Ri into the global scientific and cryptozoological discourse was catalyzed heavily by Roy Wagner. Having heard extensive tales of the Ri back in 1979 during his anthropological fieldwork, Wagner formally brought the creature to the attention of the International Society of Cryptozoology (ISC) in 1982.[7] Wagner's published assertions—detailing the humanoid trunk, genitalia, and fluked tail—coupled with his declaration that the credibility of his indigenous informants could not be "lightly dismissed," triggered widespread excitement.[7] The scientific community was intrigued by the prospect of an undiscovered marine mammal, while skeptics drew parallels to historical attempts to validate UFOs, Bigfoot, and fairies.[7] The resulting expeditions serve as a fascinating case study in field biology, the challenges of marine observation, and the mechanics of confirmation bias.

The 1983 ISC Expedition: Ambiguity and Behavioral Anomalies

In June and July of 1983, Wagner led a formal scientific expedition to New Ireland under the auspices of the ISC, accompanied by prominent researchers J. Richard Greenwell, Gale J. Raymond, and Kurt von Nieda.[6] The stated objective was to determine definitively whether the Ri was an unclassified marine mammal.[6] The team traveled to Namatanai to interview locals who claimed to have butchered and eaten a Ri, and they subsequently conducted field observations.[6]

During this expedition, the team successfully observed an unidentified animal in Ramat Bay on the eastern coast of New Ireland.[6] Wagner reported seeing a long, dark body swimming horizontally at the surface several hundred meters away.[6] While the creature succeeded in evading unambiguous, close-range detection, the team compiled observational data that they believed ruled out known marine species.[7]

Upon returning, the team published a field report in *Cryptozoology* Volume 2 titled *"Further Investigations into the Biological and Cultural Affinities of the Ri"*.[6] They consulted with various

marine mammalogists and reached a tantalizing consensus: the animal observed was deemed potentially new to science.[6] The zoologists based this conclusion on specific behavioral anomalies exhibited by the observed creature:

1. **Extreme Vertical Flexure:** The creature bent and moved in a vertical manner that was considered anatomically impossible or highly atypical for the rigid, bulky spine of a dugong.[6]
2. **Duration of Submergence and Evasion Speed:** The animal demonstrated rapid movements and consistently extended dive times that did not align with the standard, lethargic behavior associated with sirenians.[6]
3. **Predatory Behavior:** The researchers believed they observed the creature actively hunting and consuming fish. Because the dugong is strictly a vegetarian sea-cow, this presumed predatory behavior fundamentally eliminated the dugong as a candidate.[6]

The 1983 report concluded with the assertion that the authors had "not been able to identify the Ri or Ilkai as part of the known inventory of zoology" and that no marine mammologists consulted were convinced the animal was one they were acquainted with.[7] They officially ruled out the dugong and finless dolphins.[6]

The excitement surrounding this potential discovery even attracted fringe figures within the cryptozoological community, such as Jon-Erik Beckjord, who traveled to PNG in response to Wagner's articles.[20] Beckjord, known for his highly unorthodox theories involving inter-dimensional shape-shifting Bigfoots and space-alien Loch Ness monsters, illustrates the spectrum of global attention the Ri phenomenon had garnered by the mid-1980s.[20]

The 1985 Resolution: Definitive Photographic Evidence

The cryptozoological mystery of the Ri was definitively resolved a mere two years later. In 1985, a subsequent expedition—sponsored by the Ecospherical Research Association of California—re-

turned to the waters of PNG equipped with advanced underwater photography and video equipment.[7] The team chartered the vessel *Reef Explorer*, captained by Kerry Piesch, and spent ten days tracking the creatures in the local bays.[19]

During this expedition, the team encountered an animal that local indigenous guides explicitly and specifically identified as an *Ilkai* (the Susurunga term for the Ri).[7] Crucially, a diver was able to approach the creature closely and capture clear, unmistakable underwater photographs and video footage.[7]

When this visual evidence was analyzed, the result was unequivocal: the creature identified by the locals as the mythological Ri was unmistakably an Indo-Pacific dugong (*Dugong dugon*).[7] Following this revelation, the scientific community acknowledged that the "mermaid of New Guinea" was a misidentified known species. J. Richard Greenwell, serving as the secretary-treasurer of the ISC, formally proclaimed in the society's newsletter that all Ri sightings were, in fact, sightings of dugongs, and the ISC declared the case officially closed.[7]

Expedition Year	Key Personnel	Core
1982 (Publication)	Roy Wagner	Gath accounts ing, hum mamma
1983	Wagner, Greenwell, Raymond, von Nieda	Dista in Rama treme ve speed, a predator
1985	Ecospherical Research Association / Kerry Piesch	Close derwater cal guide identifie *Ilkai*.

Biological Reality: The Indo-Pacific Dugong (Dugong dugon)

The definitive identification of the Ri as the dugong necessitates a detailed examination of *Dugong dugon* to understand how this specific marine mammal so perfectly catalyzed the mermaid

myth across human history and specifically within the coastal cultures of PNG.

Morphology and the "Mermaid" Illusion

The dugong is a large marine mammal belonging to the order Sirenia, an ancient group (early- to mid-Cenozoic) that also includes the three living species of manatees and the extinct Steller's sea cow (*Hydrodamalis gigas*), which was hunted to extinction in the 18th century.[22] Unlike manatees, which frequently inhabit estuarine and fresh waters, dugongs are strictly marine and are found throughout the warm coastal waters of the Indian and western Pacific Oceans, spanning approximately 40 countries.[22] The northern waters of Australia and the coastlines of PNG represent contemporary strongholds for the species, where they are largely dependent on benthic seagrass communities for subsistence.[22]

Several distinct anatomical features of the dugong directly contribute to the Ri mythology:

1. **Pectoral Mammae:** The mammary glands of female sirenians are located high

on their upper bodies, near their armpits (axillae).[25] When a female dugong rises to the surface to nurse her calf, she often supports the young with her paddle-like forelimbs (flippers).[24] From a distance, this posture bears a striking, uncanny resemblance to a human mother cradling and nursing an infant at her breast.[25] This directly accounts for the indigenous descriptions of the female Ri possessing human-like breasts and cradling young.[19]

2. **Fluked Tail:** While manatees possess a rounded, paddle-like tail, the dugong possesses a fluked, dolphin-like tail.[22] This perfectly matches the physical descriptions of the Ri's lower anatomy terminating in a pair of lateral fins.[4]
3. **Head Shape and Submergence:** The dugong has a sharply downturned snout adapted for benthic grazing.[22] However, when they break the surface to breathe, their round heads and lack of a pronounced dorsal fin can create a humanoid silhouette against the glare of the water.[22]

The association between Sirenians and mermaids is a globally documented historical phenomenon. In 1493, Christopher Columbus famously sighted manatees off the coast of North America and recorded them in his log as "mermaids" (or sirens), noting only that they were not half as beautiful as depicted in legends.[26] This historical misidentification extends back to antiquity; the very name of the order, *Sirenia*, is derived from the Sirens of ancient Greek mythology, who were originally depicted as bird-women but later conflated with fish-tailed mermaids.[25] Pliny the Elder dedicated portions of his 1st-century text *The Natural History* to describing tritons and nereids, indicating the deep roots of projecting human forms onto marine life.[25] Similarly, the first recorded half-fish, half-human creature was Oannes, a Babylonian god from the 4th century BCE.[25]

Reconciling the 1983 Behavioral Anomalies

If the Ri is undeniably a dugong, how can the highly anomalous behaviors reported by the 1983 expedition—extreme vertical flexure, predatory be-

havior, and high-speed evasion—be biologically explained?

First, the observation of "predatory behavior" was almost certainly an optical illusion or a misinterpretation of foraging dynamics. Dugongs are the only exclusively marine mammals that are strictly herbivorous, dedicating their lives to grazing on seagrass beds day and night.[24] Because their brain size is exceedingly small relative to their body mass (weighing a maximum of about 11 ounces, or roughly 0.1% of body weight), they do not possess the neurological hardware or complex cognitive capacity necessary to develop high-speed predatory hunting strategies to capture fish.[24] It is highly probable that the researchers in 1983, observing from a distance of several hundred meters, saw a dugong actively tearing at stubborn seagrass rhizomes in shallow water.[6] This vigorous rooting activity often flushes out small fish, creating splashing that from afar appears to be predatory lunging.[6]

Second, regarding the observations of "extreme vertical flexure" and high-speed diving [6], recent studies on the behavioral ecology of dugongs reveal that their predator-evasion tactics are far more dy-

namic than historically believed. Adult dugongs have few natural predators, but calves are highly vulnerable to large coastal sharks (such as tiger sharks) and killer whales.[24] Extensive ecological research conducted in Shark Bay, Australia, demonstrates that dugongs actively manage their predation risk by altering their habitat use.[30] When tiger sharks are common, foraging dugongs will abandon shallow, food-rich seagrass beds for deeper, safer waters.[30] When forced into an acute evasion scenario, a dugong is entirely capable of sudden, powerful thrusts. Furthermore, female sirenians are fiercely protective of their young; there are documented historical instances of cows fleeing rapidly with their calves, or even headbutting predators.[31] A panicked, defensive dive by a dugong, especially in crystal-clear tropical waters, could easily be misinterpreted as the anomalous "vertical descent" or vertical flexure described by Gary Opit in 1973 and the ISC team in 1983.[6]

Finally, researchers have posited the "emaciated dugong" hypothesis to explain morphological discrepancies.[6] A sick, starving, or highly emaciated dugong would lose its characteristic bulky, fusiform shape, rendering it much slimmer and

elongated. These are the exact physical traits explicitly attributed to the Ri by observers who noted its slim body.[6] Such a sickly individual would look drastically different from the *bo narasi* ("ocean pig") recognized by the Barok, leading the locals to categorize the anomalous animal under the mythological umbrella of the Ri.[6]

Alternative Biological Catalysts: Snubfin Dolphins and Globsters

While the 1985 expedition conclusively linked the localized term *Ilkai/Ri* to the dugong, the vast, biodiverse waters of PNG harbor other marine entities that undoubtedly contribute to, and perpetuate, the localized mermaid mythos. When multiple known species or biological phenomena are observed sporadically and filtered through a shared cultural mythology, they coalesce into a single composite entity in the folklore.

The Australian Snubfin Dolphin (Orcaella heinsohni)

A premier secondary candidate contributing to Ri sightings is the Australian snubfin dolphin (*Orcaella heinsohni*). Historically conflated with the Irrawaddy dolphin (*Orcaella brevirostris*), the snubfin dolphin was formally recognized as a distinct, separate species following morphological and genetic studies.[32] This species occurs throughout the tropical coastal waters of northern Australia and the southern coastal regions of PNG.[33]

Crucially, in recent years, robust populations of both the Australian snubfin dolphin and the Australian humpback dolphin (*Sousa sahulensis*) have been confirmed in the Kikori Delta of the Gulf Province of PNG.[1] The importance of this region to these vulnerable species led to the Kikori Delta being designated as an Important Marine Mammal Area (IMMA) by the IUCN in 2017.[34] Habitat suitability modeling also suggests that their range likely extends into the Bismarck Sea and around New Ireland.[32]

The anatomy of the snubfin dolphin makes it highly susceptible to anthropomorphic misidentification. Unlike the classic bottlenose dolphin or

spinner dolphin, the snubfin possesses a bulbous, rounded melon (forehead) and lacks a prominent beak or rostrum. It is also tri-colored.[32] When a snubfin dolphin breaches the surface, its smooth, rounded head looks distinctly un-dolphin-like and heavily mimics the silhouette of a human head. Given that local legends—such as the aforementioned *Pidu* of the Gope tribe—explicitly state that snubfin dolphins are the literal reincarnations of human women and children, it is evident that indigenous populations actively associate the physical appearance of this dolphin with the human form.[15]

If a snubfin dolphin were to be spotted off the coast of New Ireland, its physical profile, coupled with its legitimate predatory behavior (hunting and consuming fish), would perfectly align with the "anomalous" 1983 Ri observations that Wagner and Greenwell failed to attribute to a dugong.[6] A snubfin dolphin hunting in the surf represents the exact intersection of a humanoid head and predatory fish-eating habits reported in Ri encounters.[6]

Cetacean Decomposition and the "Globster" Phenomenon

The mythology of the Ri is occasionally bolstered not just by living sightings, but by physical, tangible evidence washing ashore. Local fishermen have historically claimed to possess or have buried the "skeletons of a Ri" on New Ireland, utilizing physical remains to validate the creature's existence.[4] While no cryptozoological mermaid skeleton has ever withstood rigorous scientific scrutiny, a modern taphonomic event perfectly illustrates how marine decomposition perpetuates the mermaid myth.

In October 2023, a bizarre, unidentified organic mass washed ashore on Simberi Island, a remote volcanic island in the Tabar Group of PNG's New Ireland Province.[36] The mass, heavily decayed and starkly white, was described by locals on the "New Irelanders Only" Facebook page as a strange dead sea creature shaped exactly like a mermaid.[36] Locals buried the mass rapidly before formal DNA extraction could occur, leaving marine experts to analyze the viral photographs.[36]

This phenomenon is scientifically classified as a "globster"—a massive lump of severely decom-

posed marine flesh that washes onto shorelines in varying states of decay.[36] Experts from the University of St Andrews and the Pacific Whale Foundation evaluated the Simberi Island photographs and concluded that the mass was either a highly decomposed cetacean (a whale or large dolphin) or a dugong.[37]

The mechanics of marine taphonomy explain this visual anomaly. When a large marine mammal or a shark dies at sea, scavengers and bacterial decomposition rapidly strip away the skin, dorsal fins, and distinct facial features. The carcass bloats, and the remaining blubber turns into a fibrous, white mass of adipocere (commonly known as grave wax).[37] The microbial shifts and bacteria produce putrescine and cadaverine, significantly raising the internal temperature of the mass.[38] As the underlying musculature begins to detach, the result is frequently an elongated, pale torso with what appears to be a "neck" (where the heavy skull detached and sank) and trailing tissue that mimics matted hair or frayed fins.[37] A classic example of this occurred in the thirteenth century at Lake Constance, Austria, where a supposed "mermaid" was hung in an archway; modern analysis reveals it

was merely a contorted, dried shark, possibly a Porbeagle.[26]

When these globsters wash up on PNG beaches, their distorted, humanoid shapes act as a blank canvas for cultural projection. Locals interpret the remains not as decomposed cetaceans, but as the physical corpses of the Ri, thereby providing seemingly irrefutable, physical reinforcement of the creature's existence in the cultural lexicon.[36]

The Epistemology of the Mythifying Process

The history of the Ri provides a profound second-order insight into the mechanics of cryptozoology, the epistemology of human observation, and the intersection of traditional folklore with empirical science. Bernard Heuvelmans, widely considered the father of cryptozoology, articulated a concept known as the "mythifying process," wherein unknown animal sightings are categorized by observers through a pre-existing lens of folklore.[26] Heuvelmans noted that "the mythifying process can sometimes be carried to the point of altering its object beyond recognition".[26]

In the case of the Ri, this process operates in a continuous cultural feedback loop. A local fisherman observes an animal in the water under suboptimal conditions—perhaps a dugong resting at a strange angle, a snubfin dolphin breaching, or an emaciated sea cow.[6] Because the cultural ontology of the observer already contains a robust, well-defined slot for a "human-fish hybrid" (the Ri/Ilkai), the human brain automatically maps the ambiguous visual data onto the expected mythological framework.[6] The observer then accurately reports exactly what they *perceived* based on their cultural conditioning: a mermaid.

When Western scientists entered this environment in the early 1980s, they fell victim to a secondary layer of confirmation bias. Because the Barok people clearly knew what a dugong was (identifying it correctly as *bo narasi*), scientists like Wagner logically but erroneously assumed the Ri had to be something entirely different.[6] They failed to account for the fact that indigenous taxonomy does not strictly adhere to rigid Linnaean phylogeny.[7] A dugong behaving normally and possessing standard physical traits is a *bo narasi*; a dugong behaving strangely, fleeing a predator, or viewed

under poor conditions, transitions into the category of the *Ri*.

This dynamic highlights both the immense value and the inherent complexity of utilizing Traditional Ecological Knowledge (TEK) in biological research. While the Ri itself ultimately proved to be a misidentified known entity, engaging deeply with indigenous lore has proven vital for modern marine conservation and zoology.[10] For example, cryptozoological methods that involve studying the knowledge of local fauna as described by indigenous peoples have quietly entered orthodox science.[10] Utilizing traditional knowledge from communities in the Solomon Islands and PNG has recently led to the discovery of new terrestrial species (documented via camera traps placed using local knowledge) and the mapping of vital conservation zones for vulnerable cetaceans in the Kikori Delta.[1] Therefore, dismissing indigenous myths as mere uneducated fiction discards vital ecological data; translating the underlying reality of that myth into modern biological frameworks is the key to ethnozoological advancement.

Conclusion

The enduring mystery of the Ri, the so-called mermaid of Papua New Guinea, is not a narrative of biological impossibility, nor is it a simple case of primitive misidentification. It is a highly complex, multi-layered ethnozoological phenomenon that sits at the intersection of marine biology, indigenous taxonomy, and human psychology.

Extensive historical, biological, and photographic evidence—anchored by the definitive 1985 Ecospherical Research Association expedition—conclusively identifies the primary biological catalyst for the Ri as the Indo-Pacific dugong (*Dugong dugon*). The dugong's unique anatomical features, including its fluked tail and pectoral mammary glands, combined with instances of atypical evasion behavior or physical emaciation, provide the physiological foundation for the mermaid mythos.

However, the Ri is best understood not as a single, undiscovered species, but as a composite cultural category. It is an indigenous taxonomic classification that absorbs and explains a variety of anomalous marine encounters. A sighting of the bulbous-headed Australian snubfin dolphin (*Or-*

caella heinsohni), an encounter with a radically decomposed cetacean globster washed ashore on a volcanic beach, or a distant glimpse of a dugong engaging in erratic predator-avoidance diving—all of these disparate biological events are synthesized by the local cultural lens into the singular, unified entity of the Ri.

Ultimately, the study of the Ri serves as a crucial case study in the intersection of anthropology and biology. It demonstrates that indigenous folklore is rarely entirely fabricated; rather, it represents a highly structured, culturally mediated observation of the natural world. Recognizing that the "mythifying process" shapes how humans—both indigenous fishermen and Western scientists—perceive their environment is essential for accurate ecological study and the preservation of the rich bio-cultural heritage of the Melanesian region.

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